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REMARKS

Claims 5 and 6 have been amended. The changes to claims 5 and 6 are not intended to limit the scope of the claimed invention, but rather to clarify the scope. Non-elected claims 7-12 have been canceled, without prejudice. New claims 13-18 have been added. The application as amended contains claims 5, 6 and 13-18. Applicants reserve the right to pursue the original claims and other claims in this and other applications.

The present invention relates to a method for processing information. The method may include the steps of: (a) receiving positional information (Step SA8; Fig. 6); (b) obtaining a polymorphism pattern associated with the positional information (Step SA10); (c) transmitting the pattern (Step SA11; Fig. 7); (d) receiving semantic information corresponding to the pattern (Step SA16); (e) making a determination based on positional information (Step SA17) and, in response to the determination, alerting the party that received the polymorphism pattern (Step SA18). In a preferred embodiment, steps (a) through (e) can all be performed by the personal computer 3 shown in Fig. 4. The claimed invention should not be limited, however, to the preferred embodiments.

In a preferred embodiment, the semantic information that is received in step (d) refers to information on phenotypes caused by one or more differences in polymorphism patterns, such as information on responsiveness to medicaments, side-effects caused by medicaments, risk of diseases and disorders, diatheses and properties, and interaction among proteins. In the preferred embodiment shown in Figs. 6 and 7, the semantic information may be a morbidity rate for colon cancer (Steps SA2, SA16).

According to another aspect of the preferred embodiment, in step (e) (Step SA17), a determination is made as to whether [1] positional information received in step (d) is consistent with [2] positional information related to the polymorphism pattern that was transmitted in step (c). For example, the personal computer 3 may make a determination as to whether [1] the polymorphism address that is received in Step SA16 matches [2] the address that was received in Step SA8 (the latter address may be transmitted in Step SA11). If there is no match ("no" from

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Step SA17), then the personal computer 3 may issue an alert to a third party, such as the shared computer 4 (Figs. 1 and 2).

In another embodiment, a determination of "no match" in step (e) leads to disclosure, to a regulatory compliance organization, of information concerning the shared computer 4 (i.e., the party that received the polymorphism pattern). Please refer, for example, to Applicants' specification, page 20, first full paragraph.

Claims 5 and 6 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Reconsideration is respectfully requested. The claims as amended are believed to be in full compliance with 35 U.S.C. § 112.

The phrase "nucleotide sequence-related information associated with positional information," in claims 5 and 6, has been changed to "polymorphism pattern." Support for the latter phrase appears in the original disclosure, including page 6, last paragraph, although the claimed invention should not be limited to the preferred embodiments described and shown in the specification and drawings.

In addition, claims 5 and 6 have been amended to clarify that the "polymorphism pattern" is "information on nucleotide sequence which differs among individual organisms and shows a pattern of nucleotide or nucleotide sequence in a polymorphism." Support for the explanation appears in the original disclosure, including page 6, last paragraph – page 7, first paragraph.

The phrase "information corresponding to the positional information," in claims 5 and 6, has been changed to "the positional information."

Claims 5 and 6 have been amended to clarify that "semantic information" "refers to information on phenotypes caused by one or more differences in polymorphism patterns, such as information on responsiveness to medicaments, side-effects caused by medicaments, risk of

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diseases and disorders, diatheses and properties, and interaction among proteins." Support for the explanation appears in the original disclosure, including page 8, second paragraph.

The phrase "information implied [by]," in claims 5 and 6, has been changed to "information corresponding to."

The phrase "information associated with the semantic information," in claims 5 and 6, has been clarified by clarifying the phrase "semantic information." Examples of the associated information are provided in the original disclosure, including page 8, third paragraph, of the specification.

Claims 5 and 6 do not recite the phrase "associated with positional information representing a position in a nucleotide sequence," nor do they recite the phrase "obtaining from among a plurality. . . corresponding to the positional information received in step (a)."

The word "consistency" has been deleted from claims 5 and 6.

Claim 5 does not recite the phrase "positional information associated with the nucleotide sequence-related information transmitted in step (c)." The phrase "the positional information associated with the nucleotide sequence-related information transmitted in step (c)" has been deleted from claim 6, last paragraph.

Claim 6 has been amended to clarify that "the third party" is "an organization for ensuring compliance with rules concerning transmission/reception of positional information or polymorphism pattern through a communication network." Support for the clarification appears in the original disclosure, including page 20, first full paragraph.

Claims 5 and 6 are rejected under 35 U.S.C. § 102 as being anticipated by Boyce-Jacino, Denton, and Qiagen Product Guide. Reconsideration is respectfully requested.

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Claim 5 recites the step of "receiving . . . information" which "refers to information on phenotypes caused by one or more differences in polymorphism patterns." In addition, the claim recites the steps of "making a determination based on [received] positional information . . . and positional information related to [a transmitted] polymorphism pattern" and, "in response to the determination," "alerting a party." These are important aspects of the claimed invention. Boyce-Jacino, Denton, and Qiagen Product Guide, including the passages identified in the March 21, 2007 Office Action, fail to disclose or suggest the recited steps, in the recited combination. Therefore, claim 5 should be allowable.

The outstanding Office Action, page 5, line 11, argues that "each of the references teaches comparison of data." The claims are more limited than that, however. The prior art references, including the passages identified in the March 21, 2007 Office Action, do not disclose or suggest the claim limitations quoted above, in the recited combination.

Further, the outstanding Office Action, page 5, lines 13-16, argues that the references "inherently" disclose "comparing nucleotide sequence data" and "reporting the results" to "users." This argument is not connected to the actual limitations of claim 5, however. Claim 5 recites the step of "making a determination based on [1] the positional information received in step (d) and [2] positional information related to the polymorphism pattern transmitted in step (c)."

In addition, claim 5 recites the step of "alerting a party that received the . . . pattern transmitted in step (c)." Note that the "party that received the . . . pattern" is not the one that did the transmitting of step (c), and please note that the claim says "alerting," not "reporting." Moreover, please note that inherency under § 102 applies, if it all, only to situations where a device necessarily performs each and every step of the claimed method. M.P.E.P. § 2112.02.

Claim 6 should be allowable over the prior art for reasons similar to those discussed above. Please note, however, the differences between claims 5 and 6 within step (e). Claim 6 recites the steps of "disclosing information concerning a party that received the polymorphism pattern," and disclosing the information to "an organization for ensuring compliance . . . ." The
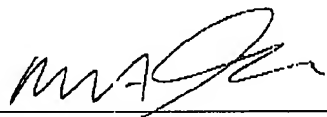
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prior art references fail to disclose or suggest these important aspects of the claimed invention, and there are also other reasons why the claims should be allowable.

New claims 13-18 should be allowable along with claims 5 and 6. Independent claims 13 and 16 generally correspond to claims 5 and 6, although the new claims do not use the word "semantic," and do not refer to "information on phenotypes caused by one or more differences in polymorphism patterns, such as information on responsiveness to medicaments, side-effects caused by medicaments, risk of diseases and disorders, diatheses and properties, and interaction among proteins."

For at least the foregoing reasons, allowance of the application with claims 5, 6 and 13-18 is solicited. Favorable action on the application is solicited.

Dated: December 20, 2007   Respectfully submitted,

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